AS09-02 - TRANSLATIONAL CROSS-VALIDATION AMONG NEUROSCIENCE AND PSYCHIATRY: PROSPECTS FOR DIAGNOSTIC ASSESSMENT AND PSYCHOPHARMACOLOGY

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There has been developed over the last few years a novel meta-empirical model for translational cross-validation among neuroscience and psychiatry (*Stoyanov, 2007, 2011, Stoyanov, Machamer, Schaffner, 2010*). Following critical analysis of the current neuroimaging methodology we have defined several shortcomings in their study designs. Those shortcomings concern the temporal gap between the administration of the psychological assessment tools and brain scan, named **temporal discordance** (i); **insufficient reliability and specificity of the findings as potential biomarkers** (ii) and **lack of convergent validity** (iii). Hence mere statistical correlations are established instead of explanatory connections. Contrastingly our model regards the clinical assessment tools (e.g. psychological inventories) and the underlying neurobiological processes as convergent validity operations. We therefore suggest that the functional brain imaging should be performed **simultaneously** with the administration of the clinical assessment tools. Real time complementary translational 'bridges' between the clinical phenomenology and causal brain mechanisms might be established: for instance certain depression score in MMPI may correspond to specific biochemical anomalies in the brain function. Such translational approach has various projections in psychiatric classification and therapy. It can be implemented in the construction of novel 'prototype' diagnostic units and the evidence-based drug choice. In practical terms, once the procedure of simultaneous cross-validation is applied to a clinical tool, it can replace the high-technological functional brain scan in further studies and so to serve as a '**pharmaco-psychological**' test for drug choice in psychiatry. By analogy therapeutic drug monitoring might be optimised reflecting the biological processes, underlying mental disorders.

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